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**CO-ORDINATION OF WORK**

**Legal aspects of automatic data processing**

**Report of the Secretary-General**

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## INTRODUCTION

1. The Commission, at its sixteenth session, had before it a note by the Secretariat which conveyed in an annex a report on the legal aspects of automatic data processing (ADP) of the ECE/UNCTAD Working Party on Facilitation of International Trade Procedures (A/CN.9/238). The report of the Working Party described legal problems which arose in the teletransmission of trade data and suggested actions which might be undertaken by various international organizations in their respective areas of competence. The report of the Working Party suggested that, since the problems were essentially those of international trade law, the Commission as the core legal body in the field of international trade law appeared to be the appropriate central forum to undertake and co-ordinate the necessary action. The Commission took note of the intention of the Secretariat to submit to the seventeenth session a report on this subject. <sup>1/</sup>

2. The use of various ADP techniques is already firmly established throughout the world and is to be found in most phases of both domestic and international trade. As the cost of ADP equipment has reduced, the cost advantages arising out of its use have extended to an increasing number of activities and users in all countries, and this trend is continuing. One consequence has been that legal rules based upon pre-ADP paper-based means of documenting international trade transactions are leading to legal insecurity in some cases and in other cases are impeding the efficient use of ADP where its use is otherwise economically justified.

3. The legal issues in respect of which the Commission might best serve as the central forum are those in which adaptations in the existing law governing international trade transactions may be necessary in order to accommodate the use of ADP for the facilitation of trade. Although no complete listing of such legal issues can be made at this time, since developments in ADP are certain to give rise to new problems not presently foreseen, some important legal issues have already been identified.

### SOME LEGAL ISSUES

#### A. Legal value of computer records

4. In many countries rules of general application require that commercial as well as other types of transactions must be in writing, or provide that those transactions can be proven in case of dispute only by a writing. In these countries the record of a transaction stored in a computer or in a magnetic

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<sup>1/</sup> Report of the United Nations Commission on International Trade Law on the work of its sixteenth session, Official Records of the General Assembly, Thirty-eighth session, Supplement No. 17 (A/38/17), para. 118.

tape or other computer memory device is of doubtful legal value. Furthermore, paper-based records produced by the computer may also be of questionable legal value, since there may be the same doubts as to the accuracy of the data.

5. As a result of the need to accommodate the widespread use of computers for commercial and administrative purposes, a number of countries have changed the relevant legislation to permit the use of computers in these circumstances and to accept as evidence records stored in computers or in computer memory devices when certain criteria are met. Because of the discrepancy in the criteria used to decide on the legal value of these records, as well as the existence of other States which continue not to accord any legal value to computer records, there are serious problems for the use of such records which have been stored in one State as evidence in a dispute arising in another State. Furthermore, many of the laws enacted to facilitate the legal acceptability of computer records did not anticipate the problems which might be created when the computer record was created in the computer of one firm or agency, transmitted to the computer of another firm or agency by teletransmission or by the physical delivery of a computer memory device and stored in the second computer.

6. The Commission at its fifteenth session requested the Secretariat to submit to a future session of the Commission a report on the legal value of computer records. <sup>2/</sup> A report on this subject will be submitted to the eighteenth session of the Commission. As part of its preparation for the report, the Secretariat has sent a note verbale to all Governments enclosing a questionnaire requesting information on this subject.

#### B. Requirement of a writing

7. Many legal rules which require that a transaction be made in or evidenced by a writing accept a telegramme or a telex as a writing. Presumably, these legal rules would also accept a paper print-out from a computer as a writing. In many cases one party enters data into a computer and for technical or legal reasons produces a print-out of that data for transmission to the other party, who then re-enters the data into its own computer. The Customs Co-operation Council is conducting a study which, inter alia, enquires into the extent to which customs authorities accept goods declarations in computer readable form, either by the teletransmission of the data or by the physical transmission of a computer memory device.

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<sup>2/</sup> Report of the United Nations Commission on International Trade Law on the work of its fifteenth session, Official Records of the General Assembly, Thirty-seventh Session, Supplement No. 17 (A/37/17), para. 73.

### C. Authentication

8. Paper-based documents are often authenticated by the signature of an authorized person. Although usually handwritten, in many countries a signature may also be made by a stamp or other mechanical or electronic means, and a number of international conventions recognize this practice. 3/

9. Techniques are available to verify the terminal from which a tele-transmitted message was sent as well as to verify the identity of the sender of such a message or the source of a magnetic tape or other computer memory device. These techniques seem to offer an assurance of genuineness that is at least equivalent to that of a signature. Nevertheless, authentication of an electronic message by electronic means may not be accepted in all countries. The question has been raised whether an electronic authentication on a paper-based print-out would serve as a "signature" for purposes of a statutory requirement that the particular type of transaction be evidenced by a signed writing.

### D. General conditions

10. Many commercial documents used in international trade contain the general conditions applicable to the transaction. When traditional paper-based documents are eliminated in favour of the teletransmission of the essential data, there is no location available in the teletransmitted message for the economical reproduction of the general conditions applicable to the transaction.

11. In some countries incorporation of general conditions by reference in a contract or in a document is widely practiced. The ECE/UNCTAD Working Party on Facilitation of International Trade Procedures has recommended an incorporation clause for use in shipper supplied or blank-back transport documents. 4/ The recommended clause could easily be adapted to other forms of contract or document. However, in other countries general conditions incorporated into a contract or document by reference are not enforced in respect of some or all types of contracts and documents used in international trade. The general concern is that the party receiving the contract or

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3/ The Commission itself has accepted such forms of authentication for use on paper-based bills of lading (United Nations Convention on the Carriage of Goods by Sea, 1978, art. 14 (3)) and a similar provision is before the Commission at this session in the draft Convention on International Bills of Exchange and International Promissory Notes and the draft Convention on International Cheques (A/CN.9/211, art. 4 (10); A/CN.9/212, art. 6 (8)).

4/ Recommendation No. 12, para. 16, TRADE/WP.4/INF. 61, TD/B/FAL/INF. 61, quoted in A/CN.9/225, para. 61.

document, or others who might rely on it, would not have adequate access to the current version of the general conditions and would not, therefore, be in a position to know the intended contractual terms. Furthermore, there is a concern that general conditions whose terms are unknown to one of the parties at the time of contracting may be unfair.

#### E. Liability

12. It is expected that the advent of wide-spread inter-firm computer-to-computer teletransmission of data will raise questions of liability which cannot easily be solved by application of traditional rules. Some of the sources of error and delay in the transmission and reception of messages are distinctly different from those where other modes of telecommunication are involved. Although it would appear that the rules in respect of liability might also be different, the outlines of the problem are not clear and there has as yet been little research on the subject. In explanation of this state of affairs the Secretariat for the Organisation for Economic Co-operation and Development, which commissioned several studies by consultants attempting to establish a conceptual framework for further analysis of liability in transborder data flows, has observed: "The main problems encountered in determining liability are due to: (1) the number of transactors involved in data flows and thus the wide range of potentially harmful behaviour; (2) the newness of the technology and the consequent lack of precision as regards liability arising from its use, the difficulty of deciding who is liable and the resulting problems of what evidence is required." 5/

13. The impact of the new technology on liability for errors and delay in the context of electronic funds transfers is discussed in the draft chapter of the legal guide on electronic funds transfers which is before the Commission at this session for general comments. 6/ The consideration of the problems within that specific factual setting may also help to clarify the issues within the broader setting of data flow in general.

#### F. Bills of lading

14. The difficulties arising out of the arrival of goods at the port of destination prior to arrival of the bill of lading are well-known. A number of different solutions have been proposed. When the goods are not to be sold while in transit and are not financed under a letter of credit, in certain trades a sea waybill is often used permitting the carrier to deliver to the consignee without presentation of a transport document.

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5/ Programme of work on the legal aspects of transborder data flows, at p. 2, OECD Doc. No. DSTI/ICCP 82.5 (11 January 1982).

6/ A/CN.9/250/Add. 4.

15. Other proposed solutions rely upon the teletransmission of data in various forms. When a bill of lading is required at the port of discharge to satisfy administrative requirements, to allow for sale of the goods while afloat or to secure financing under a letter of credit from a bank at the port of discharge, the essential data could be teletransmitted to that port and the bill of lading be issued by the carrier at that place. <sup>7/</sup>

16. Under another proposed solution, the bill of lading issued at the port of loading would be deposited in a central registry and subsequent sales or financing of the goods would be notified to the registry by teletransmission. When the goods arrived at the port of discharge, the registry would notify the carrier that it had the bill of lading in its possession and would inform the carrier of the proper recipient of the goods. <sup>8/</sup> Yet other proposals envisage the complete substitution of paper-based maritime transport documents by the teletransmission of the essential data. Such a proposal is most easily implemented where a sea waybill would otherwise be acceptable. Where a bill of lading would be needed to satisfy administrative requirements, to facilitate sale of the goods afloat or to finance the sale through a letter of credit, special techniques have been envisaged which are intended to give the same security of control over the goods as is currently offered by the bill of lading.

17. The proposals to reduce delays at the port of discharge and to reduce the cost of documentation for ocean shipment of goods by substitution of other acceptable forms of transport documentation, and particularly by the eventual use of data transmission as an optional form of documentation, face many legal and commercial obstacles before they can be realized. Among the legal obstacles are the need to find a means to incorporate general conditions of transport into the contract in an acceptable way, as mentioned in paragraphs 10 to 11 above, and the refinement of the techniques referred to above for assuring adequate control over the goods while afloat.

#### CONCLUSION

18. The need for co-ordination by the Commission to find appropriate and harmonized solutions to the legal problems which are arising out of ADP has been stressed at various fora as being of particular importance because, with the exception of the Commission, the international organizations competent in respect of aspects of these problems are either regional in nature or have a specialized substantive competence. The Commission at its fifteenth session

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<sup>7/</sup> A/CN.9/225, para. 33.

<sup>8/</sup> The UNCTAD Ad hoc Intergovernmental Group to consider Means of Combatting all Aspects of Maritime Fraud, including Piracy, at its meeting held in Geneva from 6 to 17 February 1984, requested the Trade and Development Board to invite the relevant specialized international and commercial organizations to study, inter alia, this proposal as a means of combatting documentary fraud (TD/B/L.684).

has already recognized the increasing importance to international trade law of the legal problems arising out of ADP by its request to the Secretariat to commence the preparation of a draft legal guide on electronic funds transfers and to submit to a future session of the Commission a report on the legal value of computer records. The Commission may now wish to decide that the subject of legal implications of ADP to the flow of international trade should be added as a priority item. A session of one of the Working Groups may be held to identify the concrete areas where solutions or the establishment of international understandings are desirable. Other international organizations concerned might be invited with the view in mind to co-ordinate activities in this field as well as to identify concrete projects on which it might be suitable for the Commission to commence work on its own. The holding of such a session may be appropriate after the Commission's eighteenth session.